

OPERATORS PRECEDENCE FOR C, C++, C#, JAVA LANGUAGES

C Language

Category	Operators	
Primary	. -> () []	→
Unary	+ - ! ~ & * ++x --x x++ x-- (type) sizeof	←
Multiplicative	* / %	→
Additive	+ -	→
Shift	<< >>	→
Relational	< > <= >=	→
Equality	== !=	→
Bitwise AND	&	→
Bitwise XOR	^	→
Bitwise OR		→
Logical AND	&&	→
Logical OR		→
Conditional	? :	←
Assignment	= += -= *= /= %= &= ^= = <<= >>=	←
Comma	,	→

C++ Language

Category	Operators	
Scope resolution	::X	←
	x::y	→
Primary	. -> () [] x++ x-- typeid const_cast dynamic_cast reinterpret_cast static_cast	→
Unary	+ - ! ~ & * ++x --x (type) sizeof new delete	←
Member pointer	.* ->*	→
Multiplicative	* / %	→
Additive	+ -	→
Shift	<< >>	→
Relational	< > <= >=	→
Equality	== !=	→
Bitwise AND	&	→
Bitwise XOR	^	→
Bitwise OR		→
Logical AND	&&	→
Logical OR		→
Conditional	? :	←
Assignment	= += -= *= /= %= &= ^= = <<= >>=	←
Comma	,	→

C# Language

Category	Operators	
Primary	. () [] x++ x-- new typeof checked unchecked	→
Unary	+ - ! ~ ++x --x (type)	→
Multiplicative	* / %	→
Additive	+ -	→
Shift	<< >>	→
Relational and type-testing	< > <= >= is as	→
Equality	== !=	→
Bitwise AND	&	→
Bitwise XOR	^	→
Bitwise OR		→
Logical AND	&&	→
Logical OR		→
Null Coalescing	??	←
Conditional	? :	←
Assignment	= += -= *= /= %= &= ^= = <<= >>=	←

Java Language

Category	Operators	
Primary	. () []	→
Unary	+ - ! ~ ++x --x x++ x-- (type) new	←
Multiplicative	* / %	→
Additive	+ -	→
Shift	<< >> >>>	→
Relational and reference test	< > <= >= instanceof	→
Equality	== !=	→
Bitwise/Logical AND	&	→
Bitwise/Logical XOR	^	→
Bitwise/Logical OR		→
Logical AND	&&	→
Logical OR		→
Conditional	? :	←
Assignment	= += -= *= /= %= &= ^= = <<= >>= >>>=	←

Precedence: top to bottom

Associativity: → = left to right / ← = right to left

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